IN THE CLAIMS:

1. (Currently Amended) Method for determining the content of a conductive component of a multi phase flow through a pipe, by supplying alternate voltage to one or more coils being arranged around the fluid conducting pipe, and then detecting the attenuation of the magnetic fields due to the induced power loss dependent or the coil impedance at resonance, dependent on the conductivity of any conductive phase component of the fluid flow, characterized in measuring the impedance of the coils at resonance frequency, said impedance varying as a function of content of the conductive phase, by using

a first coil design having a given number of windings ~~optimised~~optimized for non-conductive continous mixtures, and

a second coil design of a different number of windings ~~optimised~~optimized for conductive continous mixtures wherein each coil is used as excitation and detection coils.

2. (Previously Presented) Method according to claim 1, characterized in the two coils are operating at two different frequencies in order to compensate for variation in the conductivity, hence determining said conductivity of the conductive phase.

3. (Currently Amended) ~~Method according to claim 1, characterized in~~ Method for determining the content of a conductive component of a multi-phase flow through a pipe, by supplying alternate voltage to one or more coils being arranged around the fluid conducting pipe, and then detecting the attenuation of the magnetic fields due to the induced power loss dependent or the coil impedance at resonance, dependent on the conductivity of any conductive phase component of the fluid flow, characterized by measuring the impedance of the coils at resonance frequency, said impedance varying as a function of content of the conductive phase, by using

a first coil design having a given number of windings optimized for nonconductive continuous mixtures, and

a second coil design of a different number of windings optimized for conductive continuous mixtures, and

using wire or cords including Cu-lices having a thickness less than the electrical skin depth of ~~Cu (~~copper~~)~~.

4. (Previously Presented) Method according to claim 1, characterized in using flat Cu-lices at a thickness of 40 μm.

5. (Previously Presented) Method according to claim 1,characterized in using a resonance frequency in the range of 1-10MHz, and preferably in the range of 2 to 8 MHz.

6. (Currently Amended) Method according to claim 1, characterized in using a resonance frequency of ~~5,5~~5.5 Mhz in order to obtain~~ing~~ a penetration depth ~~in the multi phase order to obtaining a penetration depth~~ in the multi phase flow, of about 10 cm, corresponding to at least half the pipe diameter.

7. (Previously Presented) Method according to claim 1, characterized in using a first coil design of one layer of 15 windings of flat Cu-cord said coil operating at a frequency of f = 2 MHz, and

a second coil design of 4 layers of 4 windings of flat Cu-cord said coil operating at a frequency of f = 9 MHz.

8. (Currently Amended) Method according to claim 1, characterized in using one single multi turn coil, in particular a 9-turn coil, which is sensitive for conductive liquid content ~~(such as water)~~ in the mixture over the whole range.

9. (Cancelled)

10. (Cancelled)

11. (Cancelled)

12. (Currently Amended) Arrangement of determining content of a conductive component of a multi phase flow through a pipe, by supplying alternate voltage to coils which are arranged around said pipe, and then detecting the attenuation of the magnetic fields due to the induced power loss dependent on the conductivity of the conductive phase of the fluid flow, characterized by

a first coil design having a given number of windings being ~~optimised~~optimized for non-conductive continous mixtures,~~ and a coil~~

a second coil having a different number of windings being ~~optimised~~optimized for conductive continous mixtures,

said coils being arranged for measuring the impedance of the coils at resonance frequency, said impedance varying as a function of content of the conductive phase.

13. (Previously Presented) Arrangement according to claim 12, characterized by

a first coil design of one layer of 15 windings of flat Cu-cord said coil operating at a frequency of f = 2 MHz, and

a second coil design of 4 layers of 4 windings of flat Cu-cord said coil operating at a frequency of f = 9 MHz.

14. (Currently Amended) ~~Arrangement according to claim 12, characterized in~~ Arrangement of determining content of a conductive component of a multi-phase flow through a pipe, by supplying alternate voltage to coils which are arranged around said pipe, and then detecting the attenuation of the magnetic fields due to the induced power loss dependent on the conductivity of the conductive phase of the fluid flow, characterized by

a first coil design having a given number of windings being optimized for non-conductive continuous mixtures,

a second coil having a different number of windings being optimized for conductive continuous mixtures,

said coils being arranged for measuring the impedance of the coils at resonance frequency, said impedance varying as a function of content of the conductive phase, and using wire or cords including Cu-lices having a thickness less than the electrical skin depth of ~~Cu (~~copper~~)~~.

15. (Currently Amended) Arrangement according to claim 12 in using flat Cu-lices at a thickness of 40 μm.

16. (Previously Presented) Arrangement according to claim 12, characterized by a multi turn coil, e. g. a 9-turn coil, which is sensitive for water content in the mixture over the whole range.

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)